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TECHNICAL STANDARD OPERATING PROCEDURE

Date: July 15, 1999 SOP No. MK-VBI70-02

Title: **Chain of Custody And Sample Handling**

APPROVALS:

Morrison Knudsen Corporation

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SYNOPSIS: Provides procedures and instructions on maintaining and documenting chain of custody and on containing, preserving, and packaging samples for shipment to off-site laboratories.

Received by QA Unit

REVIEWS:

TEAM MEMBER	SIGNATURE/TITLE	DATE
EPA Region 8	Brenda Garcia / RPM	7/24/99
Morrison Knudsen Corp.	Ellen J. Mellott / QA Coordinator	7/16/99

REV.	DATE	REVISION DESCRIPTION

TECHNICAL STANDARD OPERATING PROCEDURE
CHAIN OF CUSTODY AND SAMPLE HANDLING

1.0 PURPOSE

The purpose of this Standard Operating Procedure (SOP) is to provide instructions to Morrison Knudsen (MK) personnel assigned to the Vasquez Boulevard/I-70 project, and their subcontractors, on maintaining and documenting chain of custody (COC) and on containing, preserving, and packaging samples for shipment to off-site laboratories.

2.0 SCOPE

This procedure covers activities associated with maintaining and documenting chain of custody and environmental sample handling. This procedure does not cover activities associated with submitting samples for analysis under EPA's Contract Laboratory Program.

3.0 REFERENCES

MK Engineering Standard 3.4, Sampling Handling Requirements

EPA Method 6010B: Inductively Coupled Plasma Atomic Emission Spectroscopy, SW-846

4.0 RESPONSIBILITIES

- The **Sampler** is responsible for collecting samples in appropriate containers, labeling sample containers and maintaining and documenting sample custody until the samples are relinquished.

- The **Field Supervisor** or a designate is responsible for review of sample labeling, chain of custody documentation, and packaging of samples for shipment.

- The **Project Chemist** will be responsible for verifying implementation of this procedure through surveillance and maintaining records.

- The **Site Manager** will be responsible for ensuring that records are properly maintained and that personnel are trained to this procedure.

5.0 REQUIREMENTS

5.1 Chain of Custody Procedures

Chain of custody must be maintained at all times and documented on a COC form. A sample is in an individual's custody if:

- It is in his/her possession
- It is in his/her view, after being in their possession
- It was in his/her possession and he/she either locked it or placed it in a sealed container to prevent tampering
- It is in a designated secure area

5.1.1 Chain of custody forms shall be used for all samples submitted to either the on-site laboratory or an off-site laboratory. An example COC for an MK contract lab is presented as an Attachment.

5.1.2 Each sample shall be entered on the COC at the time of sample collection by the Sampler(s). The following information shall be entered:

- Project identification
- Sample identification number
- Date and time sampled
- Sample media
- Required analyses
- Number of containers collected for the sample

5.1.3 Each person on the sampling team shall sign the COC in the Samplers Signature box. When samples are relinquished, one of the sampling team members will sign the "Relinquished By" signature block at the bottom of the COC and enter the date and time. The person receiving the samples will sign the "Received By" signature block.

5.1.4 One copy of the COC will be retained along with corresponding airbills and provided to the Project Chemist for review and filing.

5.1.5 Custody seals will be placed on all containers used to ship samples to an off-site laboratory, and also will be used whenever the samples are not in view or in a secured area. The seals must be placed so that it would not be possible to tamper with the sample without disturbing the seal.

5.2 Sample Containment, Preservation and Holding Times

5.2.1 Samples will be placed in containers compatible with the analytical request and laboratory requirements. Soil samples collected for metals analysis by XRF will be collected in plastic, sealable bags. Soil samples collected for metals analysis at an off-site laboratory may be collected in plastic, sealable bags or in glass jars. Rinsate blank water samples will be contained in certified clean polyethylene bottles. Sealed plastic bags will be checked to verify complete closure of the seal.

5.2.2 Soil and dust samples will not require any preservation. Rinsate samples will be preserved with nitric acid to pH<2, Samples should be handled and stored to maintain integrity and prevent damage to the container.

5.2.3 Soil and dust samples submitted for analysis by ICP Method 6010B will have a maximum holding time for analysis of 6 months following sample collection.

5.3 Sample Packaging and Shipping Procedures

5.3.1 Samples will be packaged so as to minimize the possibility of container breakage, and to provide containment in the event of container breakage or leaking. Any samples in glass containers for off-site shipment will be packaged using bubble wrap or equivalent packing materials.

5.3.2 All samples shipped to an off-site laboratory will be contained in a plastic cooler with packing material, if necessary, to prevent excessive agitation of the contents.

5.3.3 A notation will be made in the "Received By" block on the COC form that a cooler was sealed for shipment via the carrier. One copy of the COC form will be retain, and the completed form will be verified against the cooler contents, placed in a sealable bag, and taped to the inside top of the cooler.

5.3.4 All coolers will be securely taped closed, sealed with a minimum of two signed custody seals and labeled with a completed air bill prior to shipment.

5.3.5 Samples that are identified as possible dangerous goods will be shipped in accordance with appropriate DOT regulations for hazardous materials.

6.0 ATTACHMENTS

Attachment - Example Chain of Custody Form

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CHAIN OF CUSTODY AND SAMPLE HANDLING

ATTACHMENT

EXAMPLE CHAIN OF CUSTODY FORM

MORRISON KNUDSEN CORPORATION

CHAIN OF CUSTODY RECORD

720 Park Blvd., P.O. Box 73
Boise, Idaho 83729
(208) 386-5000

Project No.:	Project Name:
Samplers: (Signature) Sampler: (Print)	

Sample Type	Sampling Point Description	Sample Date	Time	Sample I.D. Number	Split Samples Yes	Split Samples No	Analysis Required	Remarks

Relinquished By: (Signature) Company:	Date/Time	Received By: (Signature) Company:	Relinquished By: (Signature) Company:	Date/Time	Received By: (Signature) Company:
Relinquished By: (Signature) Company:	Date/Time	Received By: (Signature) Company:	Relinquished By: (Signature) Company:	Date/Time	Received By: (Signature) Company:
Relinquished By: (Signature) Company:	Date/Time	Received By: (Signature) Company:	Received for Laboratory By: (Signature) Company:	Date/Time	Total No. Samples This Shipping Container: Company:
Relinquished By: (Signature) Company:	Date/Time	Received By: (Signature) Company:	Relinquished By: (Signature) Company:	Date/Time	Received By: (Signature) Company: